

SHOFFNER CONSULTING

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October 3, 2018

Revised: January 30, 2019

Cameron McKinnon
Gamut 360
3726 Broadway Ave. #301
98201

RE: Tree Inventory - 12047, 12049, 12051 20th Ave. NE Seattle.

Cameron.

This report is provided to report on the recent inventory I conducted on the property at the address of 12051 20th Ave. NE in the City of Seattle, WA. This report provides the results of my findings. I assigned each trees with numbered metal tags. These numbers are referenced in the accompanying tree evaluation data spread sheet and on the tree inventory map.

During my inventory, I gathered the following information on the trees:

- Species
- Diameter at 54"
- Crown spread
- Health and condition

The City of Seattle's regulations of trees on private property are provided in DPD Director's Rule 16-2008 and were referenced for preparation of this report.

Revisions to this report include the following:

- Recommended replacement tree locations;
- Justification for how the Douglas fir replacement trees will meet the canopy cover requirements of SMC 25.11.090;
- Includes language regarding no modification of the replanting plan without approval of the City of Seattle project planner or a representative;
- Includes a note on restricted activities within the drip lines of retained exceptional trees.

1.0 Site Conditions and Proposed Development

The property is located in north Seattle in the Lake City area. The lot is developed with a single family residence and a detached accessory building in a neighborhood developed with single family residences. The proposed development is to remove the existing structures and redevelop the lot with multiple single family residences.

2.0 Tree Inventory

There are 24 trees on the site and six just off-site to the west/northwest with driplines that extends onto the property. Information on the trees is provided in tree evaluation

data spread sheet. One of the symbols shown on the survey is technically a large, multi-trunked shrub and not a tree.

The trees on the site range in size from 6" to 54" dbh. Following are the species found on the site, along with their threshold diameters to be exceptional.

- Austrian black pine (*Pinus nigra*) - 24"
- Big leaf maple (*Acer macrophyllum*) - 30"
- Bitter cherry (*Prunus emarginata*) - Never exceptional unless in grove
- Black locust (*Robinia pseudoacacia*) - 30"
- Boulevard cypress (*Chamaecyparis pisifera* 'boulevard') - 30"
- Cedar of Lebanon (*Cedrus libani*) - 30"
- Douglas fir (*Pseudotsuga menziesii*) - 30"
- Common hawthorn (*Crataegus monogyna*) - 16"
- Hinoki cypress (*Chamaecyparis pisifera*) - 30"
- Pacific madrone (*Arbutus menziesii*) - 6"
- Saucer magnolia (*Magnolia x. soulangeana*) - 30"
- Silver Birch (*Betula pendula*) - 24"

There are no groves on the site. Eight trees on the property, and 1 just off-site with a dripline that spreads onto the site, meet the threshold diameter to be classified as exceptional and all are in good condition and health. Following is the information on these trees.

Conditions of Exception

- 1 This tree is a Douglas fir measuring 44" dbh and has a crown spread diameter of 50 feet. It's located along the northern boundary in the western portion of the site.
- 2 This tree is a Douglas fir measuring 42" dbh and has a crown spread diameter of 50 feet. It's located next to tree #1.
- 4 This tree is Douglas fir measuring 34" dbh. It is located just off-site to the west and its crown spreads 20 feet onto the site (to the east).
- 9 This tree is a Douglas fir measuring 48" dbh. It is located along the northern boundary in the east-west center of the site.
- 11 This tree is a Douglas fir measuring 54" dbh. It is located just east of tree #9.
- 12 This tree is a Pacific madrone measuring 10" dbh. It is located along the northern border between trees #9 and #11.
- 14 This tree is a Douglas fir measuring 34" dbh and has a crown spread diameter of 52 feet. It's located next to tree #15 and 21.
- 15 This tree is a multi-trunked cedar of Lebanon measuring 46" dbh and has a crown spread radius of 39 feet to the west. It's located near the southeast corner of the property, along the eastern property line.
- 20 This tree is a Douglas fir measuring 33" dbh and has a crown spread radius of 23 feet to the west. It's located in the northeast corner of the site.

3.0 Tree Protection

Retained exceptional trees are required to be protected throughout development. At a minimum, the inner root zones of the exceptional trees will need to be protected as an area of no encroachment. If the outer root zones are to be encroached, the protection fencing will need to be installed within the outer root zone at the edge of the proposed encroachment. No more than 1/3 of the total area of the outer root zone is allowed to be impacted, permanently or temporarily.

The tree evaluation data spread sheet provides the distances (in radial feet) of the inner root zones and the maximum allowable area to be impacted within the outer root zone.

During demolition of the existing home and accessory structure, the fencing will need to be placed along the footprint of the features to be removed. Once the clearing is complete, the fencing should be moved to the edge of the outer root zone.

The tree protection area is to be an area of no encroachment, no impacts, no dumping, no storage of materials and no development

4.0 Tree Removal and Replacement

The City of Seattle is requiring replacement of all trees greater than 24" in diameter are replaced with one or more trees, the size and species of which shall be determined by the Director. The requirement also that the project arborist provide recommendations for species and size of the replacement trees that, upon maturity, will replace the canopy cover of the removed trees. Seattle Municipal Code 25.11.090 requires the following for replacement trees for each exceptional tree removed:

"Each exceptional tree and tree over two (2) feet in diameter that is removed in association with development in all zones shall be replaced by one or more new trees, the size and species of which shall be determined by the Director; the tree replacement required shall be designed to result, upon maturity, in a canopy cover that is at least equal to the canopy cover prior to tree removal. Preference shall be given to on-site replacement. When on-site replacement cannot be achieved, or is not appropriate as determined by the Director, preference for off- site replacement shall be on public property."

Following are the recommended replacement tree species, sizes and numbers for the removed trees. These calculations assume a minimum dripline diameter upon maturity of the replacement trees of 43'.

<u>Tree #</u>	<u>Dripline/Canopy Area</u>	<u>Ratio</u>	<u>Size</u>	<u>Number</u>	<u>Mature Canopy</u>
9	48' / 1,809 s.f.	2:1	6'	2	2,904 s.f.
10	25' / 491.s.f.	1:1	6'	1	1,452 s.f.
14	52' / 2,123 s.f.	2:1	6'	2	2,904 s.f.
15	64' / 3,216 s.f.	2:1	6'	2	2,904
Total	7,639 s.f.			7	10,164

Based upon these numbers, the proposed 2:1 replacement with Douglas firs satisfies the required canopy coverage upon maturity of the replacement trees.

To provide optimal growing conditions for these replacement trees, I recommend the following planting locations:

Parcel A - Two trees planted in the front yard, one adjacent to the walk, and one next to the north property line spaced 30 feet on center. Two trees planted near the southwest corner of the lot, just north of the new driveway 30 feet on center.

Parcel B - Two trees planted near the southwest corner of the lot, just north of the new driveway spaced 30 feet on center and one tree planted along the eastern boundary.

No modification is to be made to the replanting plan without approval of the City of Seattle project planner or a representative.

5.0 Use of This Report

This report is provided to Gamut 360 as a means of addressing the inventory of the trees on the lot at the address of 12051 20th Ave. NE. in the City of Seattle. This report addresses only those trees on the project site and just off-site. If any trees are retained, there is no guarantee they will survive through construction and there is no guarantee that trees just off-site will not be damaged by the proposed construction. As trees are dynamic and their conditions can change rapidly due to environmental changes, Shoffner Consulting cannot be held liable for the failure of any retained trees.

Please call if you have any additional questions.

Cordially,

A handwritten signature in black ink, appearing to read "Tony Shoffner".

Tony Shoffner
ISA Certified Arborist #PN-0909A
TRAQ

TREE EVALUATION DATA

Gamut 360 - Cedar Park I, LLC. 12051 20th Ave. Seattle.

Shoffner Consulting - January 18, 2019

Tree #	Species	dbh	Dripline	Condition	Notes	Status	IRZ	Max ORZ S.F.
1	Douglas fir (Pseudotsuga menziesii)	44	50	2	Generally good condition and health.	Exceptional	12.5	491
2	Douglas fir (Pseudotsuga menziesii)	42	50	2	Generally good condition and health.	Exceptional	12.5	491
3	Douglas fir (Pseudotsuga menziesii)	20	34	2	Generally good condition and health.	Significant	N/A	N/A
4	Douglas fir (Pseudotsuga menziesii)	34	20 onto site	2	Generally good condition and health.	Exceptional - Off site	12.5	491
5	Bittercherry (Prunus emarginata)	10	30	1	Good condition and health, young and vigorous	Significant	N/A	N/A
6	Black locust (Robinia pseudoacacia)	8	24	1	Good condition and health, young and vigorous	Significant	N/A	N/A
7	Black locust (Robinia pseudoacacia)	8	24	1	Good condition and health, young and vigorous	Significant	N/A	N/A
8	Black locust (Robinia pseudoacacia)	8	24	1	Good condition and health, young and vigorous	Significant	N/A	N/A
9	Douglas fir (Pseudotsuga menziesii)	48	48	2	Generally good condition and health.	Exceptional	12	452
10	Boulevard cypress (Chamaecyparis pisifera)	25	34	2	Generally good condition and health.	Significant	N/A	N/A
11	Douglas fir (Pseudotsuga menziesii)	54	44	2	Generally good condition and health.	Exceptional	11	383
12	Pacific madrone (Arbutus menziesii)	10	32	1	Good condition and health, young and vigorous	Exceptional	8	201
13	Austrian black pine (Pinus nigra)	14	25	1	Good condition and health, young and vigorous	Significant	N/A	N/A
14	Douglas fir (Pseudotsuga menziesii)	34	52	2	Generally good condition and health.	Exceptional	13	531
15	Cedar of Lebanon (Cedrus libani)	46	39 to W, 24 to E	2	Two trunks. Generally good condition and health.	Exceptional	17.5	962
16	Saucer magnolia (Magnolia x. soulangeana)	8	32	1	Good condition and health, young and vigorous	Significant	N/A	N/A
17	Hinoki cypress (Chamaecyparis obtusa)	6	8	1	Good condition and health, young and vigorous	Significant	N/A	N/A
18	Black locust (Robinia pseudoacacia)	6	20	1	Good condition and health, young and vigorous	Significant	N/A	N/A
19	Hawthorn (Crataegus monogyna)	8	15	1	Good condition and health, young and vigorous	Significant	N/A	N/A
20	Douglas fir (Pseudotsuga menziesii)	33	23 to W	2	Generally good condition and health.	Exceptional	11.5	415
21	Bittercherry (Prunus emarginata)	11	18'	2	Good condition and health, young and vigorous	Significant	N/A	N/A
22	Unidentified deciduous	N/A	N/A	4	Dead	N/A	N/A	N/A
23	Japanese maple (Acer japonicum)	4	14	1	Good condition and health, young and vigorous	Significant	N/A	N/A
24	Black locust (Robinia pseudoacacia)	8	24	1	Good condition and health, young and vigorous	Significant	N/A	N/A
25	Douglas fir (Pseudotsuga menziesii)	17	15 onto site	Off-site	Generally good condition and health.	Significant	N/A	N/A
26	Black locust (Robinia pseudoacacia)	11	16 onto site	Off-site	Good condition and health, young and vigorous	Significant	N/A	N/A
27	Douglas fir (Pseudotsuga menziesii)	26	18 onto site	Off-site	Generally good condition and health.	Significant	N/A	N/A
28	Black locust (Robinia pseudoacacia)	18	8 onto site	Off-site	Good condition and health, young and vigorous	Significant	N/A	N/A
29	Crimson king maple (Acer platanoides)	24	18 onto site	Off-site	Generally good condition and health.	Significant	N/A	N/A
30	Silver birch (Betula pendula)	4	12	2	Good condition and health, young and vigorous	Significant	N/A	N/A

Tree # - Number of tree assigned on survey tag

Species - Genus and species

Size - Diameter in inches at 4.5' above grade

Dripline - Diameter in feet of tree crown spread/dripline

Condition - Rating scale of tree condition

1=Excellent condition and health; 2=Generally good condition and health; 3=Fair condition and health, some defects; 4=Poor condition and health or dead, to be removed.

Notes - Notes on general tree condition and health and any defects present in the trunk or crown.

Status - Exceptional or not exceptional. Retain or Remove I (impacts), Remove C (condition)

IRZ - Inner root zone radius from tree in feet

Max ORZ S.F. - Maximum allowable area (square feet) to be impacted within the ORZ (outer root zone)



12" CONC
=322.36

Text

Text

SESS 9900376 (R1)

FOUND REBAR/
LS# 11
0.09' N & 0.1
OF PROP

C/L OF DITCH